SRF PROJECT PRESENTATION

Part 1 – Additional Water Storage Tank

Estimated Cost = $893,800

We propose to construct a smaller additional storage tank which together with our existing tank would enable our system to meet MassDEP's two day storage requirement. Meeting the storage requirement has been a past DEP inspection deficiency and as a result earned us points in the SRF qualification process. The additional tank will also increase our system firefighting capacity and give us redundancy of a critical system component during future contingencies. Another major benefit of the new tank will be in its ability to take the place of our existing tank during the future repainting process with no loss of service or functionality.

In the very near future our existing welded steel water storage tank will need to be repainted in order to maintain that investment and continue to have MassDEP approval for its use in our system. However, in order to proceed with repainting, the Ely Road Tank must be taken off line and drained. This presents a major problem because the water tank is an irreplaceable part of our water system. The level of water in our tank is what maintains the water pressure throughout our system. Taking our tank off line essentially closes or dead ends our water system. The only way to maintain positive pressure to our customers would be to run our well pumps 24 hours a day for the entire time the tank is out of service. The repainting process is estimated to take 60 days or more depending on the weather we experience. The 24 hours a day pumping for that length of time could be very costly due to the potential of long term damage to our wells and the likelihood of main breaks and service leaks caused by the unavoidable pressure surges. We would also be at the mercy of National Grid. If we lose power, we lose pressure, which presents the risk of backflow contamination. Outdoor water use would also have to be banned during that period of time. The biggest problem however, would result from the total absence of fire fighting capacity with the tank out of service. Our well pumps cannot provide the amount of water needed to fight a fire. The storage in the tank does that. We would be required to notify all homeowners and businesses in the vicinity of our water system to contact their fire insurance provider and make them aware of this loss of system capacity or risk a claim rejection possibility. After many hours of discussion between our Commissioners, MassDEP, our consultant and other water systems we concluded that constructing an additional tank would be the most advantageous solution. We began researching potential site locations around town and received price estimates from our engineer. We soon learned that the most cost effective option was to expand our existing site and place the new tank next to the old one. Alternative locations were much more expensive because of the additional infrastructure work that would be required. Long runs of water main piping, electricity, telephone lines and access roads would all have to be installed at a new site whereas our existing site on Ely Road already had those items. After more discussion and consideration of all the factors involved, we decided expanding our existing site would be our best and most affordable option.

The impact of not moving forward with this project will be quite serious. During our next MassDEP inspection (2007) we will be required to submit a plan detailing how and when we will repaint our existing tank and secondly how we plan to meet the two day storage requirement. Failure to comply with their requirements will ultimately result in fines to our Department. Without SRF funding the cost of compliance will be significantly higher.

Part 2 – Bethany Road Well Building Replacement

Estimated Cost = $387,300

We propose to remove the dilapidated existing building and construct a new one that will effectively house the well and the needed upgrades. The upgrades include new electrical service panels, pump and motor control panels, flow meter, corrosion control chemical feed system and security measures. The condition of the existing building along with the lack of a flow meter or corrosion control system has been a past DEP inspection deficiency and as a result earned us points in the SRF qualification process. Construction of a new building will bring that facility up to DEP requirements and allow it to be used on a permanent basis thereby lightening the load on our other wells and also take advantage of the "grandfathered status" of the Bethany Road Well.

Currently the Bethany Road Well cannot be used on a full time basis because of three major equipment inadequacies. The well house lacks a pump motor control panel, a corrosion control system and a master flow meter. Those deficiencies were never addressed because of the extremely poor condition of the building and the fact that the existing building size cannot fit the MassDEP mandated pH adjustment system. We now only pump this well on a monthly basis by means of a direct drive diesel engine for the purposes of water quality testing, which has been excellent, and to retain Bethany's MassDEP active well status. It is our intention to take advantage of this established water source and begin using it on a regular basis to share the water demand load carried by our other wells and in so doing prolonging all of their life spans. We learned a very hard and costly lesson from our experiences with the Bunyan Road Well, that it is much more beneficial to pump three wells at 300 gallons per minute than one well at 900 gallons a minute. Also, it is tremendously more cost effective to refurbish an existing and established well than to locate and develop a totally new source for an estimated cost of approximately one million dollars.

The impact of not moving forward with this project is difficult to envision. Currently, the wells we now have in service are capable of meeting our daily water demand. However, if the situation changed and for some unforeseen circumstance we needed to use Bethany Road regularly, we would be forced to come into compliance with all DEP regulations immediately. We probably wouldn't qualify for SRF funding at that time which would drive the total cost of the project higher. Changes in Water Source regulations and how they are interpreted are also hard to predict. In the future there is the possibility that MassDEP may require us to address the deficiencies at that well or be forced to abandon it. Once a well has been abandoned, it can never be used as a water source again.

Part 3 – Fern Hill - State Ave. Water Main Replacement

Estimated Cost = $178,100

We propose to replace approximately 250 feet of six inch water main on State Avenue and approximately 550 feet of two inch water main on Fern Hill Road with new eight inch cement lined ductile iron pipe. The project also includes the installation of two new fire hydrants; one at the end of the line on Fern Hill Road and one at the end of the line on State Avenue. These

improvements will improve water quality in that section of our system because of the added flushing capability of the hydrants and as a result earned us points in the SRF qualification process.

The pipe work will also lay the groundwork for a future **emergency use only** interconnection with the Palmer Water System. The flood of 2005 brought to light just how vulnerable our water system is in times of disaster. Emergency preparedness is a key part of our responsibility as water suppliers to the Town of Monson. Planning for the sharing of water resources with Palmer during an emergency is part of that preparation.

The impact of not moving forward with this project would be predominately financial. Currently MassDEP is not mandating the improvements mentioned above, although they highly recommend them. However, in the future MassDEP could change their thinking and make them requirements. We most likely would not qualify for SRF funding then and be forced to use higher interest financing to do the work.

Financial Impact

We propose to borrow 1.5 million dollars through the SRF Loan Program (see table below).

Loan Amount	Rate	Term (yrs)	1st Year Payment	Total Interest Paid
$1,500,000	2%	20	$105,000	$315,000

To enable us to make the loan payment we propose the following water rate increase (see table below).

Water Rate	Minimum Usage Charges		Typical Usage Charges	
	Quarterly (6,250 gal)	Yearly (25,000 gal)	Quarterly (22,500 gal)	Yearly (90,000 gal)
Present $3.70 / 1000 gal	$23.13 / Qtr	$92.50 / Yr	$83.25 / Qtr	$333.00 / Yr
Proposed $4.40 / 1000 gal	$27.50 / Qtr	$110.00 / Yr	$99.00 / Qtr	$396.00 / Yr
Impact of Proposed Increase	**$4.37 / Qtr**	**$17.50 / Yr**	**$15.75 / Qtr**	**$63.00 / Yr**

The SRF low interest rate and 20 year term are what make this large project manageable. The 2% rate limits the amount of money that will be wasted on interest which means the water ratepayer's dollars are being spent in the most efficient way possible.

As an example for comparison, if we had to proceed with the **Tank project alone without SRF funding**, the next option would be bank financing (see table below).

Loan Amount	Rate	Term (yrs)	1st Year Payment	Total Interest Paid
$900,000	4.5%	12	$115,500	$263,250

The first year loan payment would be forced slightly higher due to a maximum loan term of twelve years from the bank. This would necessitate a slightly higher water rate to cover the additional amount. An important factor to note is that the total interest paid for both loans is comparable even though we are borrowing significantly more for a longer period of time and addressing more deficiencies through the SRF. We also need to stress that the bank financing would leave us with no flexibility if the Bethany Road Project were forced on us during the twelve year term.

Summary

Clearly, the Additional Water Storage Tank is the most urgent need of our Department. Unfortunately, it is also very expensive which is why we sought out alternative ways to finance the project. The SRF Loan Program is a competitive process where project applications are rated based on a list of criteria. The more criteria our project met, the higher our point total. The SRF Program has a funding limit so only the highest rated projects will get funded. We have applied in the past with no success because our point total was not high enough. This time we took a different approach. We grouped multiple projects together under one application which significantly raised our point total and qualified us for the program. So on its own the Storage Tank would not have earned enough points, but with the Bethany Road improvements and the pipe line work we qualify. We now have the opportunity to address multiple system deficiencies with low interest (2%) financing. Failure to obtain Town Meeting authorization will mean forfeiting the SRF funding opportunity for this year. The federal government has cut funding to the Mass SRF Program by over 33% for next year. The median household income in Monson continues to rise. Those two factors together make it unlikely we would qualify again for SRF funding in the future. Regardless, we will need to move forward with the Tank project in order to avoid compliance issues with MassDEP.

This proposed project would be financed <u>entirely</u> by the Water ratepayers and we must emphasize that none of the Water Department's budget or projects are funded with tax revenues. We have been working on this proposal since we finished the Bunyan Road Well project in 2005. We have consulted with our engineers, representatives of MassDEP and other water system operators. We have discussed this proposal and several others at length at our Commission meetings. We have weighed our need for these system improvements along with all the other related factors. We completely understand how significant the financial impact will be on our customers. But we also understand what the financial impact on our customers could be if we are forced to take on projects at an inopportune time in the future. The Board of Water & Sewer Commissioners is tasked with the responsibility of ensuring that the Town of Monson will have a safe, clean and affordable drinking water supply today and in the future. It is a large responsibility and we take it very seriously. We strongly believe this SRF funded project is the most efficient way to address our system deficiencies and it will do so in the most cost effective manner at our disposal.